

Name _____ Period _____

Gene to Protein Practice

5' GTAGCTAGCCTTAAGGCCCTTTAGGATCTTCGCAAGGATAGGCATAACCGTAGCAATCCAGG 3'

3' _____ 5'

1. On the **LINE** above, write the complementary DNA strand.
2. The **provided** sequence is the CODING strand. What is the name for the strand that YOU just wrote?

3. Below, write the corresponding Pre-mRNA that would result, including the proper 5' & 3' designations.

4. What is the name of this process that makes mRNA from DNA? _____
5. Use the book to summarize the 3 parts of this process. **Complete on separate paper.**
6. In the first sequence I provided you, several letters are UNDERLINED. These represent "Junk sequences" that need to be removed.
 - What is the name for these "**Junk** pieces"? _____
 - What is the name for the "**Necessary** pieces"? _____
 - What process cuts them out and links the necessary parts back together?

Write your final mRNA that has the junk cut out and important pieces put together.

- _____
7. What are 2 other ways that the mRNA will be modified? What is the significance of these modifications?

8. Use the genetic code to write out the proper sequence of amino acids that will result. Keep in mind the 5' and 3' directionality importance during Ribosome reading!

9. What is the name for this process? _____

10. Use the book to summarize the 3 parts of this process. **Complete on separate paper.**